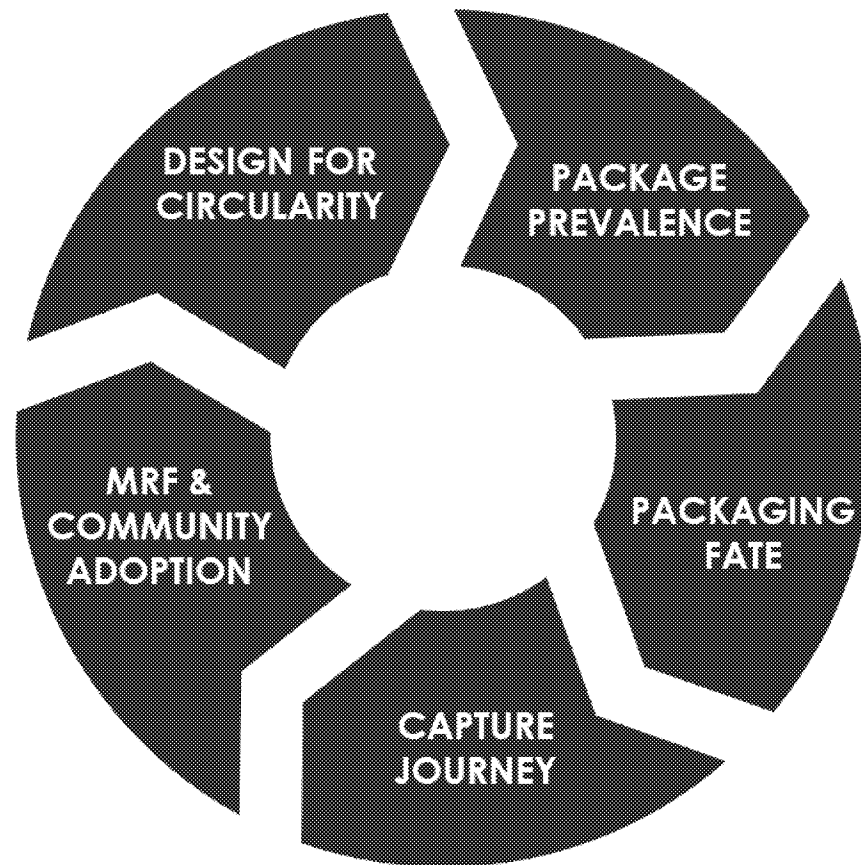
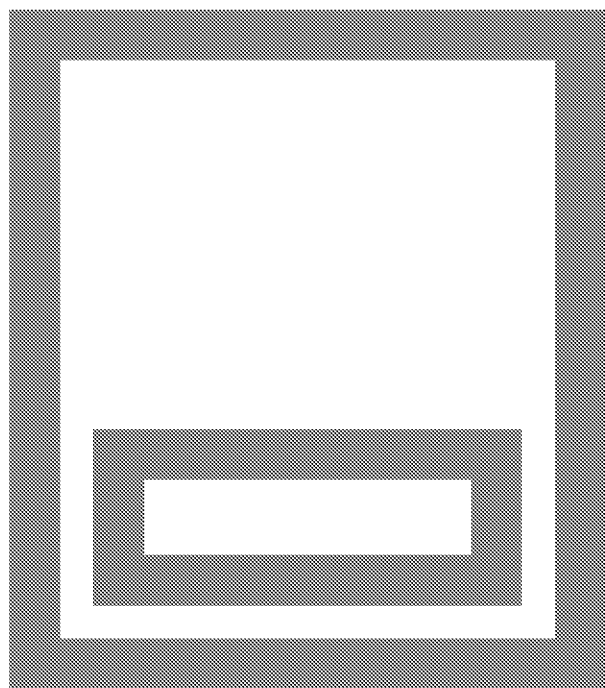




PATHWAY to CIRCULARITY

AN INITIATIVE OF THE RECYCLING PARTNERSHIP





Agenda

- What is the Pathway to Circularity?
 - ✓ *Definitions*
 - ✓ *Pathway Framework*
 - ✓ *Material Coalition Examples*
- Strategic Assessment to Circularity
- Metrics of Success
- Circularity Council

What is The Pathway To Circularity?

THE RECYCLING PARTNERSHIP'S PATHWAY TO CIRCULARITY

The **Pathway to Circularity** will address the limitations associated with the recyclability and circularity of packaging materials today.

The Pathway will be focused on packaging that is not yet commonly recyclable. This action-oriented and solutions-based initiative will outline, address, and successfully navigate current and future packaging and recycling system challenges, making circularity tangible.

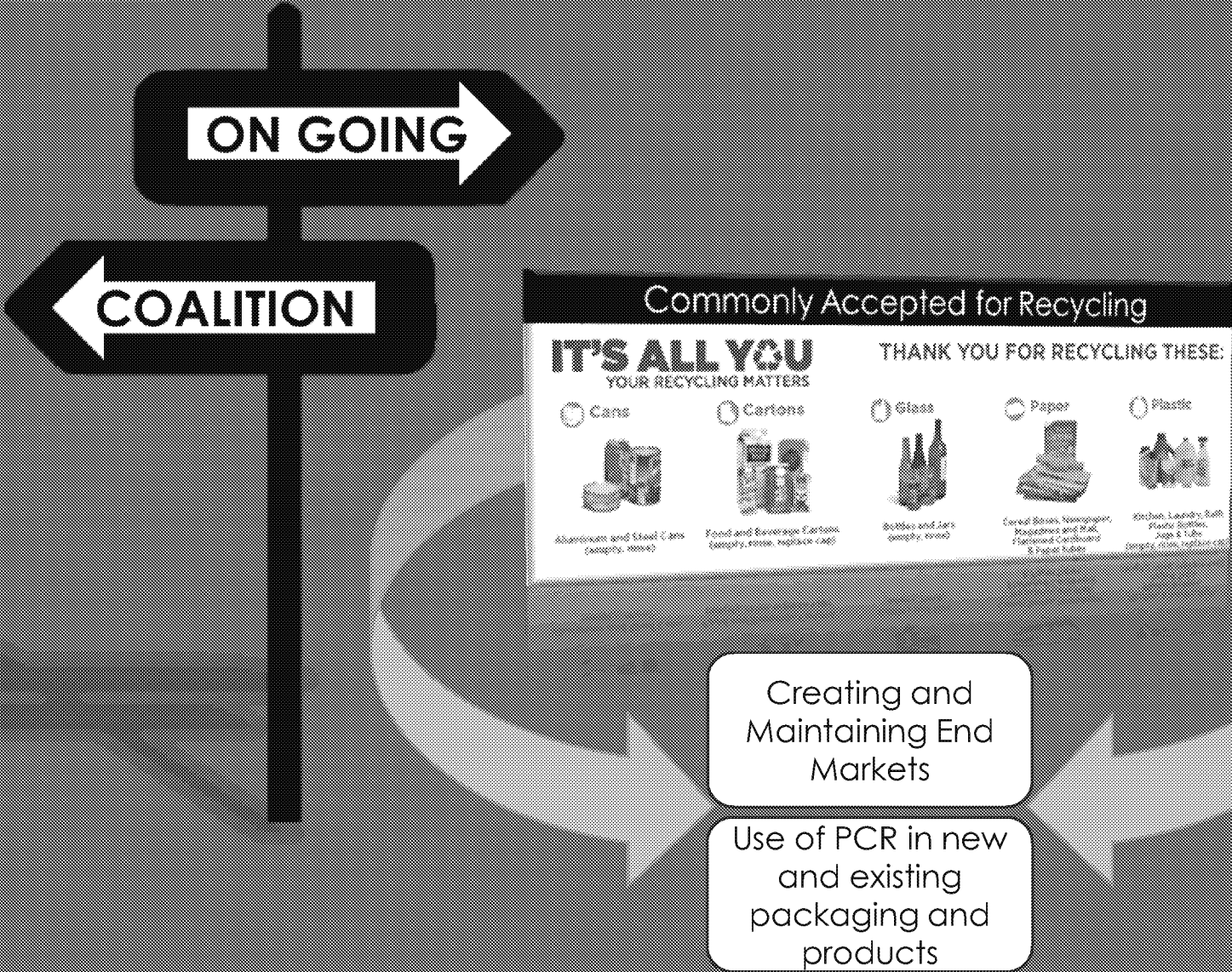


FOUNDATION: NAVIGATING THE RECYCLING SYSTEM

“COMMONLY ACCEPTED” FOR RECYCLING
... is a moment in time

The **Pathway to Circularity** is a living and changing roadmap.

Attaining ‘**Commonly Accepted for Recycling**’ is not an end point, but a milestone that needs continuous evaluation and at times additional work to ensure sustaining practices.



What is the Pathway to Circularity?



Definitions

Pathway to Circularity Key Definitions

CIRCULARITY, within the Pathway to Circularity, is currently defined by recycling and reprocessing packaging materials back into materials (either packaging or other products), therefore keeping materials in circulation. This includes both mechanical and chemical recycling processes, but—in line with ISO definitions—it explicitly excludes technologies that do not reprocess materials back into materials but instead into fuels or energy.

TECHNICALLY RECYCLABLE is defined by a package having a successful:

- ✓ **Packaging Fate**, meaning 60% of US consumers have the ability to recycle the primary material of the package as an accepted item, and there is post-consumer demand for that material
- ✓ **Capture Journey**, meaning the package successfully sorts and is captured at the MRF at XX%
- ✓ **Design for Circularity**, meaning the package follows the respective design guide and is designed to bring value to end markets, and has support from the reproducers for the addition of this package or material to the existing stream

ACTUALLY RECYCLABLE is defined by a package or material being commonly accepted as recyclable across the US. This goes beyond being technically recyclable by focusing on what happens at scale (i.e. achieving 30% recycling rate in line with EMF definition). To achieve actual recyclability, the package or material will:

- ✓ Successfully meet the requirements of Pathway to Circularity **Package Prevalence**, addressing both critical mass and look-a-like concerns
- ✓ Successfully navigate **MRF and Community Adoption**

Additional Pathway Definitions

ACCESS

Within the Pathway to Circularity, access is defined by community collection program access, which is defined by population. *Pathway currently does not extend beyond municipal collection programs: curbside or drop-off centers.*

CAPTURE

Capture, as it is defined within Pathway to Circularity, is the end point for a material or package in a MRF. It refers to the package or material being captured in the bale or bunker.

CHEMICAL RECYCLING

Breaking down polymer structure into monomers and other basic chemical elements. This is an attractive option for plastic products that are difficult to recycle mechanically due to low quality, composite nature, or low economic value. The outputs can be used as virgin material alternatives in manufacturing new polymers.

COALITION

A group of like-minded companies coming together pre-competitively to support a common industry goal.

MATERIAL

The primary material of the package or general material of focus (paper, metal, plastic resin type, etc.)

MATERIAL RECOVERY FACILITY (MRF)

A facility employing various manual and machine processes to sort recyclable materials, remove contamination, and process, usually by bailing, for shipment and sale to various markets.

PACKAGE

Any product to be used for the containment, protection, handling, delivery, storage, transport, and presentation of goods from raw materials to processed goods, from the producer to the user or consumer, including processor, assembler, or other intermediary.

PATHWAY CONSIDERATION

A consideration refers to an important aspect, but not a requirement, for recyclability or circularity. It is an aspect that would strengthen a material or packages circularity.

PATHWAY REQUIREMENT

A requirement is mandatory for a package or material to realize true recyclability and circularity. Requirements must be answered YES, unless otherwise noted, for the material or package to reach circularity.

POST-CONSUMER RECYCLED CONTENT (PCR)

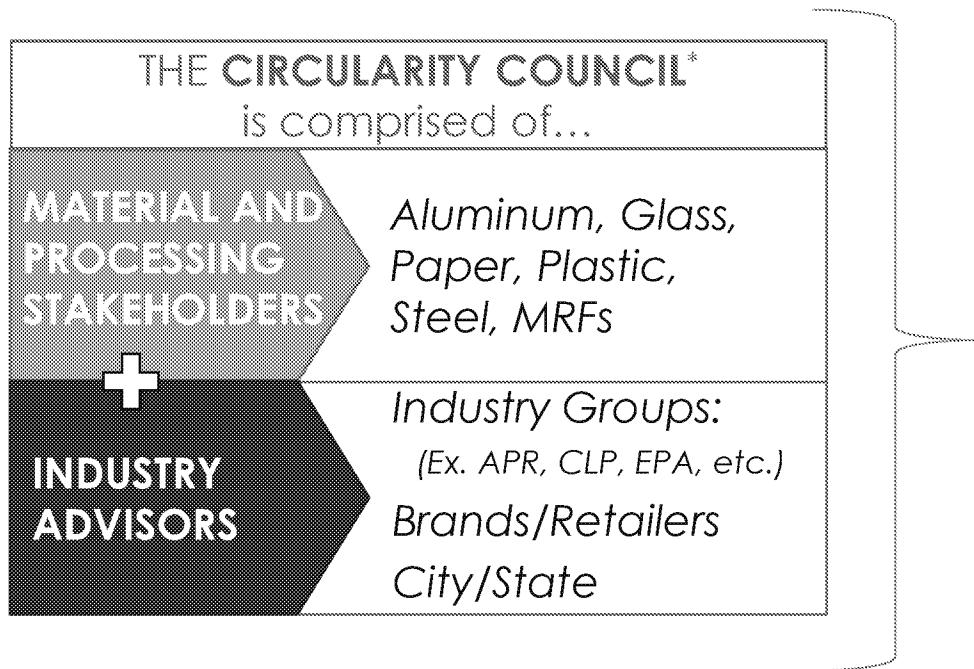
Pathway to Circularity uses the ISO 14021 definition, which is consistent with the Ellen MacArthur Foundation and the Association of Plastic Recyclers. ISO14021's usage of term clarifies post-consumer material as material generated by households or by commercial, industrial and institutional facilities in their role as end users of the product which can no longer be used for its intended purpose. This includes returns of material from the distribution chain.

SORTATION

Sortation refers to a package or material being correctly sorted by size and shape to the correct region of the MRF, paper lines or container lines. This is characterized by size sortation and 2D/3D sortation. Sortation, as it is defined within Pathway to Circularity, is not an end point and does not refer to the package or material ending up in the correct bale or bunker.

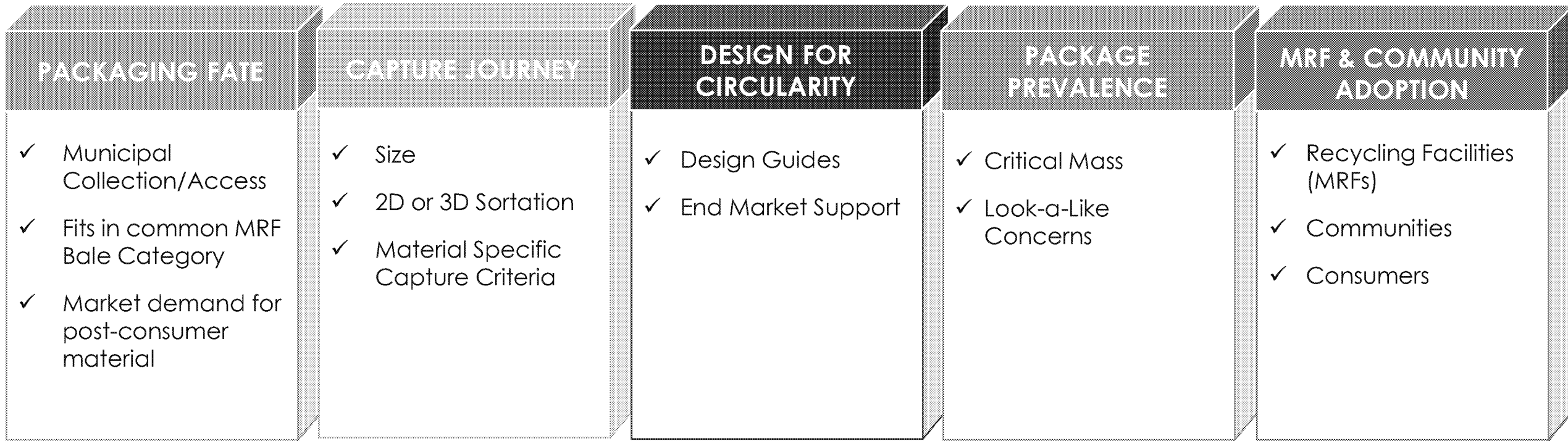
Pathway Framework

Pathway to Circularity



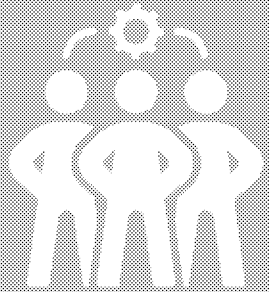
*The Circularity Council's role and specific make-up is described on slides 40 and 41 of this deck

Pathway to Circularity Building Blocks



If all building blocks requirements are not met, the material is not circular and there is an opportunity to form a coalition

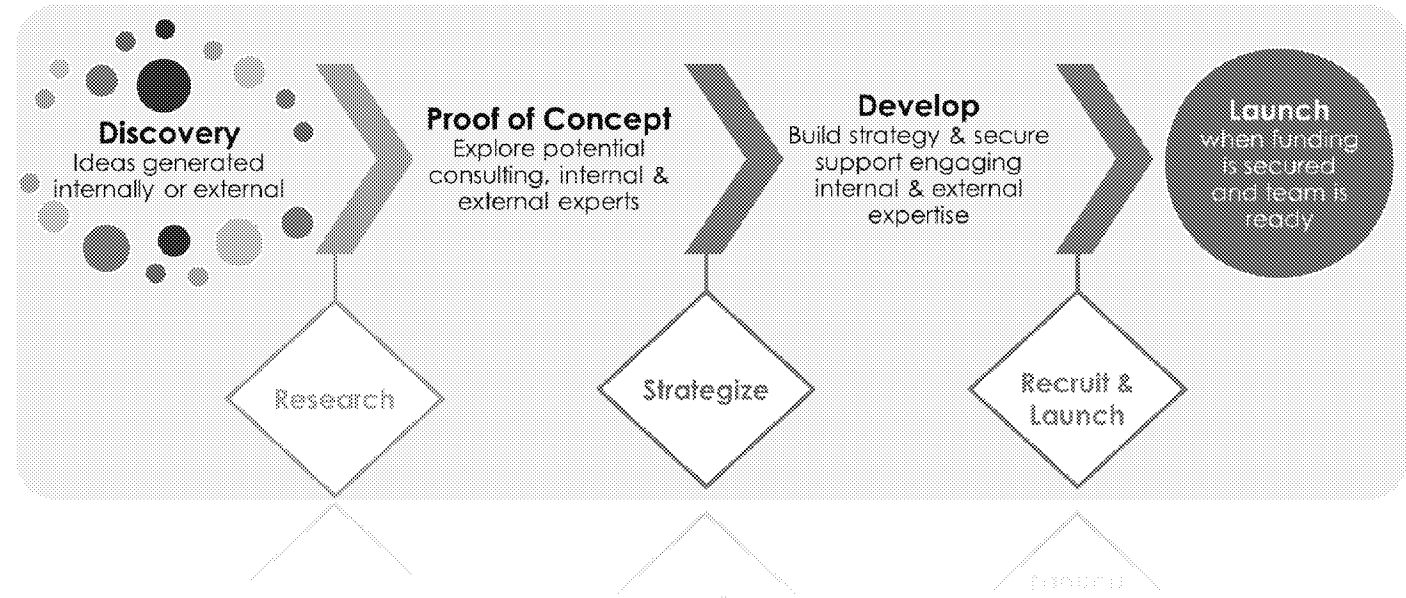
When and How does a Coalition Form?



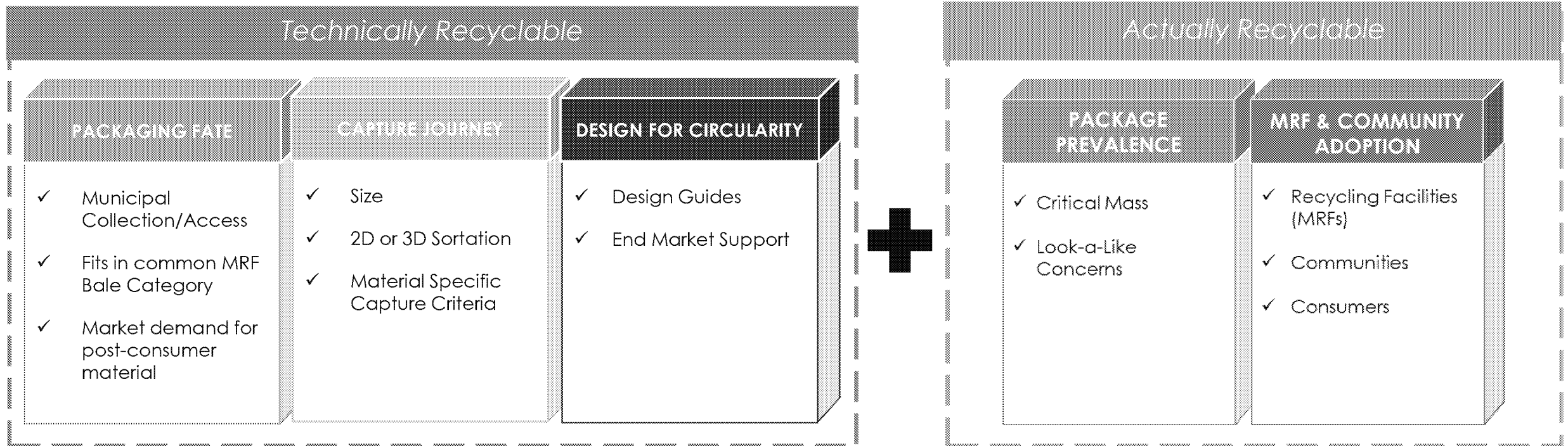
EXAMPLE COALITION CRITERIA

The Recycling Partnership has developed criteria to help establish when and how coalitions form

- ✓ Is research needed to prove out solutions?
- ✓ Will the solutions meaningfully improve the system by adding value/mitigating challenges?
- ✓ Are there multiple companies willing to fund the initiative?
- ✓ Are there actionable steps that we can pursue to advance toward scalable circular solutions?
- ✓ How much funding is needed to make meaningful progress? Do we have solid leads to secure that funding?
- ✓ What stakeholders need to be at the table?



Strategic Assessment to Circularity



Of note: Some of the materials we've found helpful to test the Pathway to Circularity are:

- Tubes
- Cartons
- EPP and EPE
- Black Plastic
- Pouches
- Paper cups
- Polypropylene
- Films

PACKAGING FATE

KEY QUESTIONS

- 1. Does the package have a successful circular packaging fate?**
- 2. Is there adequate recycling system demand/pull?**

KEY ELEMENTS

1. Municipal Collection/Access
2. Fits in Common MRF Bale Category
3. Market Demand for Post-Consumer Recycled Material (PCR)

1. Municipal Collection/Access

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<p><input type="checkbox"/> Can the majority (60%) of U.S. consumers recycle the material?*</p> <p><i>*Current industry standards for determining access are FTC Green Guides- Pathway to Circularity is a living framework and will update sources upon industry changes</i></p>	<ul style="list-style-type: none"> ➤ Confirm current access to understand gap ➤ Work with MRFs and municipalities to enable increased access (Ex. Grants) ➤ Assist in communication and education of residents

PACKAGING FATE

- ✓ Municipal Collection/Access
- ✓ Fits in common MRF Bale Category
- ✓ Market demand for post-consumer material

2. Fits in Common MRF Bale

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<p>Does the package fall into a common MRF bale category?*</p> <ul style="list-style-type: none"> <input type="checkbox"/> Aluminum (UBC, 'Dirty Aluminum') <input type="checkbox"/> Glass <input type="checkbox"/> HDPE (Natural, Color) <input type="checkbox"/> Paper (OCC, MP, Cartons/Aseptic) <input type="checkbox"/> PET <input type="checkbox"/> PP/3-7 <input type="checkbox"/> Steel <p><i>*ISRI Commodity Specification Process could be referenced?</i></p>	<ul style="list-style-type: none"> ➤ Why does it not fall within one of the bale types? What needs to change? ➤ Are new bale specifications needed? ➤ Work with MRFs to accept new bale specifications ➤ Is there opportunity for a new economically viable bale to be created?

PACKAGING FATE

- ✓ Municipal Collection/Access
- ✓ Fits in common MRF Bale Category
- ✓ Market demand for post-consumer material

3. Market Demand for Post-Consumer Material

REQUIREMENTS and CONSIDERATIONS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<ul style="list-style-type: none"> <input type="checkbox"/> Does this package hurt the recyclability of other materials? (<i>Requirement is No</i>) <input type="checkbox"/> Is there a market bale specification for the material? <input type="checkbox"/> Does the material have demonstrated use in the manufacture of products? <input type="checkbox"/> Do end markets have consistent and sustainable market demand for this post-consumer material? <p>CONSIDERATIONS:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Are there existing end markets (<i>more than one</i>) for the primary packaging material? <input type="checkbox"/> Are there at least 3 consistent end markets in different geographic areas? <input type="checkbox"/> Are there adequate markets for the estimated volume of material recycled? 	<ul style="list-style-type: none"> ➤ Work with end markets to accept new bale specifications ➤ If no markets exist, create new markets ➤ Work to create end markets in different geographic areas ➤ Work with existing reprocessors to increase their operating capacity (Ex. Grants) ➤ Create a demand pull: Are there companies making public commitments for PCR use of this material type?
DEFINITIONS	
<p>End Markets = In this building block 'End Markets' refer to the purchasers and buyers of MRF bales. Example: Paper Mills or Plastic Reprocessors (Reclaimers)</p> <p>Geographic Areas = Defined by EPA regions</p>	

PACKAGING FATE

✓ Municipal Collection/Access

✓ Fits in common MRF Bale Category

✓ Market demand for post-consumer material

CAPTURE JOURNEY

KEY QUESTIONS

1. Does it successfully sort at the MRF at the XX% MRF capture rate threshold?

KEY ELEMENTS

1. Size
2. 2D or 3D Sortation
3. Material Specific Capture Criteria

1. Size and
2. 2D or 3D Sortation

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<p><u>Size</u></p> <p>❑ Does the package pass* the APR Size Sortation Protocol?</p>	<p><u>Size</u></p> <p>➤ Understand what the size obstacles are and innovate solutions</p> <p>➤ Are there alternative equipment options that lead to success? (Ex. Grants to MRFs)</p>
<p><u>2D or 3D Sortation**</u></p> <p>❑ Does the package pass* the APR 2D/3D Sortation Test?</p>	<p><u>2D or 3D Sortation</u></p> <p>➤ Understand what the 2D/3D obstacles are and innovate solutions</p> <p>➤ Are there alternative equipment options that lead to success? (Ex. Grants to MRFs)</p>

*Exception: Glass

**APR's 2D/3D Sortation Test not yet published

CAPTURE JOURNEY

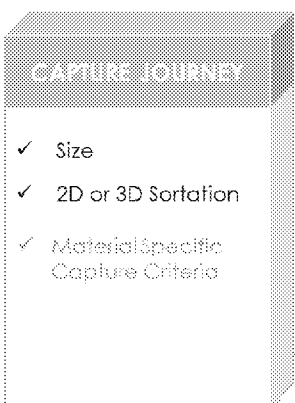
✓ Size

✓ 2D or 3D Sortation

✓ Material Specific Capture Criteria

3. Material Specific Capture Criteria

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<ul style="list-style-type: none"> <input type="checkbox"/> Does the package follow the respective material design guide? <input type="checkbox"/> Are there design flaws that impact sortation and/or capture? <i>(Requirement is No)</i> <input type="checkbox"/> Can the material or package be sorted <u>AND</u> captured at a MRF? <input type="checkbox"/> Does the capture of the material/package damage the recovery of other materials? <i>(Requirement is No)</i> <input type="checkbox"/> Are there contaminants (moisture/food) that could impact sortation and capture? <i>(Requirement is No)</i> <input type="checkbox"/> Does the material/package enter the appropriate bale? <input type="checkbox"/> Does the material/package negatively impact the rest of the bale? <i>(Requirement is No)</i> 	<ul style="list-style-type: none"> ➤ Understand what the material specific obstacles are and innovate solutions ➤ Are there alternative options that lead to success for this material? ➤ Identify any design flaws that prevent successful sortation or capture and what alternatives could be used or developed to enable successful capture ➤ Work together to address design flaws and implement identified alternatives ➤ Conduct MRF studies to understand current issues/obstacles with sortation, capture, and contamination



DESIGN FOR CIRCULARITY

KEY QUESTIONS

1. Is the package designed to bring value to end markets?

KEY ELEMENTS

1. Design Guides
2. End Market Support

1. Design Guide

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<div><div><input type="checkbox"/> Does the package follow the respective design guide?<ul style="list-style-type: none">✓ Plastic- Association of Plastic Recyclers✓ Paper- AF&PA (Work in Progress)✓ Aluminum- Aluminum Association (WIP)? Glass- In conversations with GPI? Steel- TBD</div><div><input type="checkbox"/> Are there design flaws that prevent sorting, reprocessing and recoverability? <i>(Requirement is No)</i></div><div><input type="checkbox"/> Does the package pass any necessary lab scale testing?</div></div>	<div><div>➤ What changes need to be made to adhere to the design guide?</div><div>➤ How could a coalition build support within the industry for the design guides and 'rules' that exist?</div><div>➤ Does the design guide need to be updated/changed?<ul style="list-style-type: none">○ Collect data to support the change and gain general industry support for this change</div></div>

DESIGN FOR CIRCULARITY

✓ Design Guides

✓ End Market Support

2. End Market Support

REQUIREMENTS AND CONSIDERATIONS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<p>Requirements:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Does the package add value to existing end market streams? <input type="checkbox"/> Are all existing end markets supportive of this addition? <p>Considerations:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Does the primary packaging material have post-consumer material included? <input type="checkbox"/> Mass Balance- Does the manufacturing company or brand currently purchase this PCR for their packaging or other products? 	<ul style="list-style-type: none"> ➤ What changes need to be made to the material or package so that it does add value to the existing end markets? ➤ What changes need to be made to get end market support from all? ➤ Work to ensure product specifications from the manufacturing companies and brands reflect the actual need of the product <ul style="list-style-type: none"> ○ Can brands change their perspective and/or standards to accommodate this PCR material (Ex. Welcoming a grey color vs. white) ○ Encourage brands to be flexible/open minded about specifications
DEFINITIONS	<ul style="list-style-type: none"> ➤ Work to 'complete the loop' by maximizing PCR usage in the package itself or through the purchase of the PCR material
<p><i>End Markets</i> = the purchasers or buyers of MRF bales (Ex. Paper Mills or Plastic Reprocessors)</p> <p><i>Consideration</i> = an important aspect, but not a requirement, for the material or package to be recyclable and circular. Considerations strengthen a material or packages circularity</p> <p><i>Mass Balance</i> = Total material used by a company relative to PCR material purchased by that same company</p>	

DESIGN FOR CIRCULARITY

- ✓ Design Guides
- ✓ End Market Support

PACKAGE PREVALENCE

KEY QUESTIONS

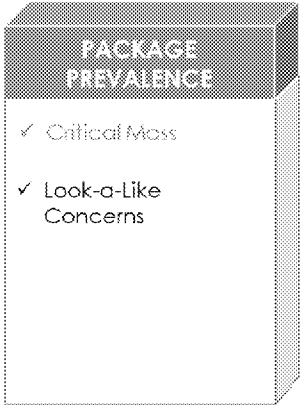
1. Is the recyclable package a commonly used package in the industry?
2. Does the package design have **CRITICAL MASS** (XX% threshold)?

KEY ELEMENTS

1. Critical Mass
2. Look-a-Like Concerns

1. Critical Mass

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<div><input type="checkbox"/> Does the recyclable package (Example: K-Cup, Toothpaste tube, Pouch) meet the Circularity Council's threshold for Critical Mass?</div>	<div><div>➤ Non-competitive collaboration to advance the recyclability of a particular material or package<ul style="list-style-type: none">○ Example: PET bottle- majority use the same materials, compete on the product level, not the package level</div><div>➤ Developing and coming to consensus with industry players on guardrails for particular packages (Tube example: must be same resin, stay within these sizes, etc.)</div></div>
DEFINITION	
<p><i>Critical Mass</i> = The threshold (%) of market volume a package must have in order for that package to meet package prevalence requirements</p>	



2. Look-a-Like Concerns

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<div><div><input type="checkbox"/> Are there look-a-like packages that could cause consumer confusion and result in contamination at the MRF? (<i>Requirement is No</i>)<ul style="list-style-type: none">○ <i>If yes, how prevalent are the look-a-like packages (% market volume)</i></div><div><input type="checkbox"/> Can consumers differentiate between recyclable (<i>Critical Mass Packaging</i>) and unrecyclable packages of this nature?</div></div>	<div><div>➤ Identify potential issues with Look-a-like packages and address through education efforts<ul style="list-style-type: none">○ Ex. Help to differentiate between recyclable and unrecyclable packages of this nature</div><div>➤ Work with industry players to join the pre-competitive collaboration in order to minimize look-a-like concerns</div></div>

PACKAGE PREVALENCE

✓ Critical Mass

✓ Look-a-Like Concerns

MRF & COMMUNITY ADOPTION

KEY QUESTIONS

- 1. Does the majority of MRF processing volume accept this package as recyclable?**
- 2. Do communities and municipal recycling programs include this material/package in current education flyers, websites, etc.?**

KEY ELEMENTS

1. Recycling Facilities (MRFs)
2. Communities
3. Consumers

1. Recycling Facilities (MRFs)

REQUIREMENTS AND CONSIDERATIONS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<p>Requirement:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Is the MRF accepting of this package in all communities they service? <input type="checkbox"/> Do MRFs know that it is possible to sort the material/package? <input type="checkbox"/> Do the MRFs know this material/package's ability to sort at the MRF, the estimated volume in the stream, and the value at end markets? <input type="checkbox"/> Are MRFs mechanically sorting this material and/or are pick line workers trained to identify the material as recyclable? <p>Consideration:</p> <ul style="list-style-type: none"> <input type="checkbox"/> What is prohibiting MRF from sorting this material/package? 	<ul style="list-style-type: none"> ➤ Pilots and case studies to gain learnings and build awareness and acceptance within MRF community ➤ Customizing MRF adoption kit for national activation ➤ Discuss this material/package's ability to sort at the MRF, the estimated volume in the stream, and the value at end markets with MRFs ➤ Conference presentations to MRF advisory groups (APR, ISRI, etc.) ➤ Possible grant opportunities <ul style="list-style-type: none"> ○ MRF Technical assistance for sortation, end markets, etc. ○ Additional bunker for this material



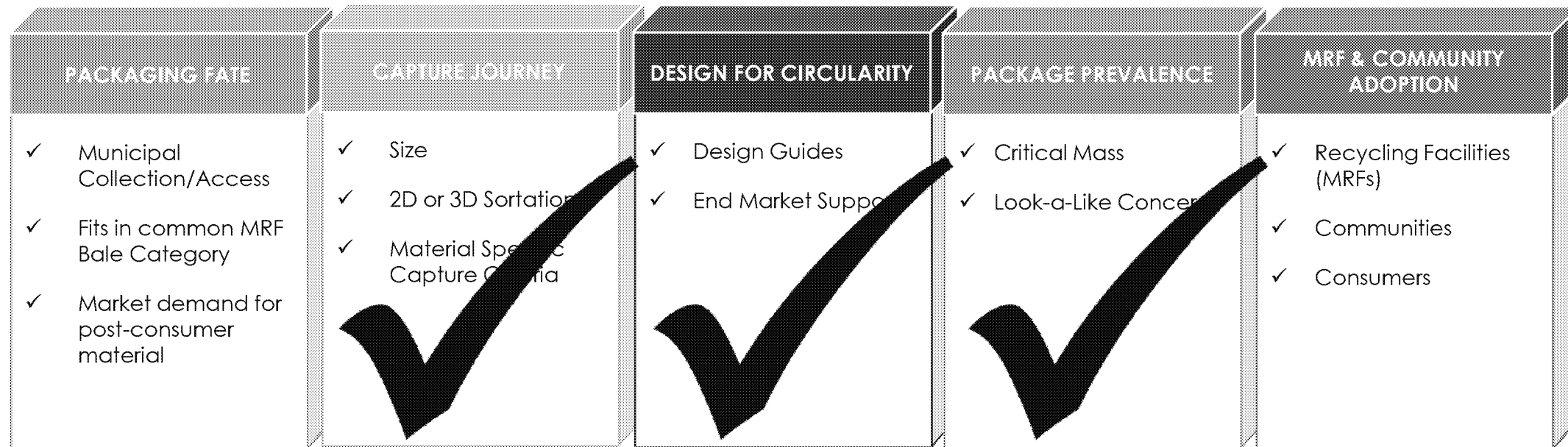
2. Communities and 3. Consumers

REQUIREMENTS	IF REQUIREMENT IS NOT MET, POTENTIAL COALITION ACTIONS
<p><u>Communities</u></p> <ul style="list-style-type: none"> ❑ Do communities and programs include this material/package in current education flyers, websites, etc.? ❑ Can a community add this material/package without an increased cost? <p><u>Consumers</u></p> <ul style="list-style-type: none"> ❑ Does it have any recyclability messaging on-pack? <ul style="list-style-type: none"> ○ Does it have a How2Recycle® label to describe recyclability? 	<p><u>Communities</u></p> <ul style="list-style-type: none"> ➤ Pilots and case studies to gain learnings and build awareness and acceptance within communities ➤ Customizing Community Adoption Kit for national activation <ul style="list-style-type: none"> ○ Work with CET to incorporate learnings ➤ Conference presentations to educate the industry on the journey (Resource Recycling, NERC, regional/state recycling conferences etc.) <p><u>Consumers</u></p> <ul style="list-style-type: none"> ➤ Work with brands to ensure integrated educational efforts of citizens on recyclability ➤ Work with SPC to get a How2Recycle label for this package ➤ Consumer awareness-building

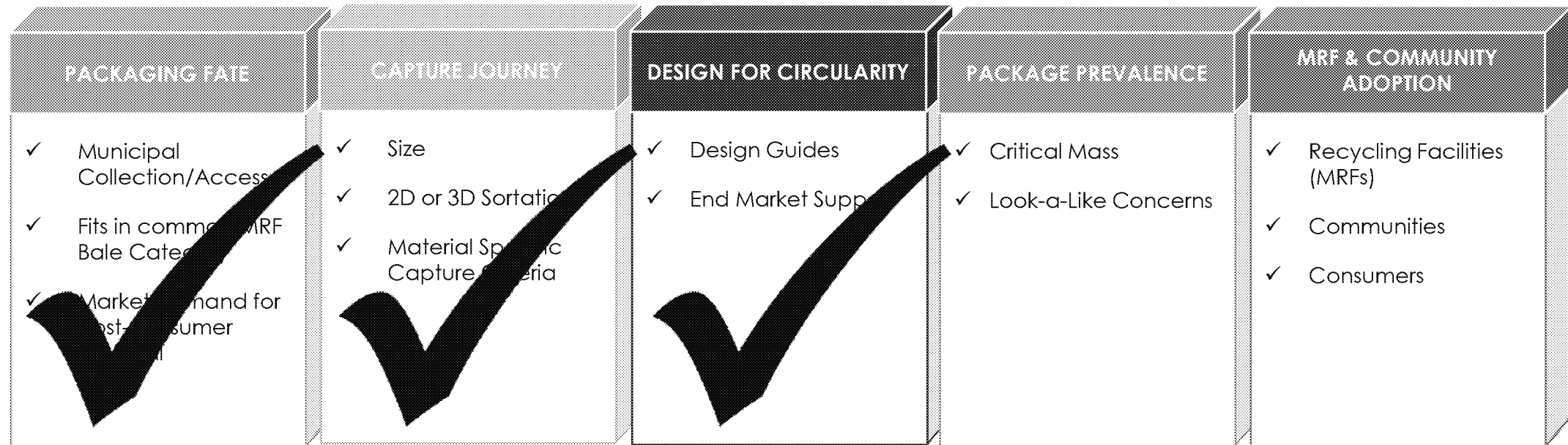


Material Coalition Examples

Polypropylene is a material of value and enjoys successful recycling in some communities/MRFs. The focus for this material is to increase curbside access for PP, ensure recyclers can sort PP successfully in their facilities, and maintain vibrant and robust end markets



A technically recyclable tube has launched after completing extensive testing with MRFs and End Markets focused on design and sortation. For tubes to realize true recyclability and circularity the focus needs to be 'critical mass' and adoption of this new tube design



Currently, Films and Flexibles face a variety of challenges in the industry. The focus for film and flexibles is to increase the recovery and utilization of plastic film and flexible packaging materials as feedstock for recycling, which involves every part of the Pathway to Circularity.

PACKAGING FATE	CAPTURE JOURNEY	DESIGN FOR CIRCULARITY	PACKAGE PREVALENCE	MRF & COMMUNITY ADOPTION
<ul style="list-style-type: none"> ✓ Municipal Collection/Access ✓ Fits in common MRF Bale Category ✓ Market demand for post-consumer material 	<ul style="list-style-type: none"> ✓ Size ✓ 2D or 3D Sortation ✓ Material Specific Capture Criteria 	<ul style="list-style-type: none"> ✓ Design Guides ✓ End Market Support 	<ul style="list-style-type: none"> ✓ Critical Mass ✓ Look-a-Like Concerns 	<ul style="list-style-type: none"> ✓ Recycling Facilities (MRFs) ✓ Communities ✓ Consumers

Metrics of Success

Metrics of Success for Coalitions & Pathway

Each Coalition will have unique and specific metrics of success. **Together**, Coalitions will have combined metrics of success to track overall Pathway to Circularity Impacts on a broader level

POLYPROPYLENE COALITION EXAMPLE

Phase 1

- ✓ Data Gathering
- ✓ Regain Widely Recycled Status

Phase 2

- ✓ Achieve Same Access as PET/HDPE Bottles

Phase 3

- ✓ Achieve 30% Recycling Rate to align with EMF Definition of Recyclable



Polypropylene Coalition

Film and Flexibles Coalition

EPS Alternatives Coalition

Tube Coalition



METRICS OF SUCCESS



XX communities impacted



XXM households reached



X% increase in access of [material]



XXM lbs recyclables kept out of landfill



\$XXM in new sortation/ infrastructure equipment



Pathway to Circularity Industry Council

Circularity Council: Who, What, and Why

WHO

The Pathway to Circularity Industry Council (Circularity Council) will consist of representation from across 36 sectors and organizations. Stakeholders from all material types as well as many industry organizations will be formally invited to sit on the Circularity Council.

WHAT

The Circularity Council will address principals, overarching ideas, and grey areas/concepts within the Pathway to Circularity. They will define new industry thresholds needed to successfully navigate the recyclability and circularity of packaging materials today.

WHY

The Pathway to Circularity will address the limitations associated with the recyclability and circularity of packaging materials today. This involves effecting system change across the US, which requires industry alignment and consensus. The objective of the Circularity Council is to form a cohesive network to enable industry alignment and catalyze change.

Possible Circularity Council Decisions

- ✓ Align on and define key industry thresholds
 - MRF Capture Rate Threshold
 - Critical Mass Threshold

Example: 60% (Access), 75% (Critical Mass), 90% (MRF Capture)
- ✓ Alignment and support for current design guides and testing protocols (Ex. APR Design Guide or 2D/3D Sorting Protocol)
- ✓ Is recyclability labeling a requirement?

Cadence

- First Meeting June 2020
- Two Meetings in Fall (September and October)



Circularity Council

ORGANIZATIONS

- CLP
- EPA
- ISRI
- SPC

GLASS

- Glass Recycling Coalition
- Owens-Illinois

METAL

- Tri-Arrows Aluminum
- Aluminum Association
- Silgan Containers

BRANDS

- Colgate
- J&J
- PepsiCo
- Starbucks

MRFs

- Balcones
- Casella
- Eureka
- Recology
- Republic
- Rumpke
- Sims
- Waste Management

CITY & STATE

- City of Phoenix
- NERC
- South Carolina

PLASTIC

- ACC
- APR
- Indorama
- KW Plastics

PAPER

- AF&PA
- Carton Council
- International Paper
- Pratt
- Recycled Paperboard Alliance

RETAILERS

- Amazon
- Target
- Walmart

▪ South Carolina

▪ MRFs

Label
▪ International Alliance

▪ Walmart



THE RECYCLING
PARTNERSHIP

PATHWAY TO CIRCULARITY INDUSTRY COUNCIL

36 Invitees

PAPER	AF&PA	Brian Hawkinson, Executive Director Recovered Fiber
	Carlton Council	Derric Brown, VP of Sustainability
	International Paper	Aimee Greg, VP Recycling and Recovered Fiber
	Pratt	Cathy Foley, VP Industry Relations and Supply Chain
	Recycled Paperboard Alliance	Paul Schutes, Executive Director
GLASS	Glass Recycling Coalition	Scott DeFite, President at Glass Packaging Institute
	Owens-Illinois	Jim Nordmeyer, VP Global Sustainability
METAL	Tri-Arrows Aluminum	Jonathan Butcher, VP Commercial
	Ball Corporations	Sara Axelrod , Director of Sustainability, Beverage Packaging
	Silgan Containers	Carolyn Takata, Marketing Director
PLASTIC	ACC	Craig Cookson, Senior Director Recycling & Recovery
	APR	Steve Alexander, President & CEO
	Indorama	Byron Geiger, COO
	KW Plastics	Scott Saunders, General Manager

BRANDS	Colgate-Palmolive	Ann Tracy, Chief Sustainability Officer
	Johnson & Johnson	Michael Chung, Senior Manager of Product Stewardship
	PepsiCo	Ed Socci, Director Advanced Research
	Starbucks	Chris McFarlane, Project Manager
RETAILERS	Amazon	Terese Kietzer, Senior Manager Sustainability
	Target	Kate Schaust, Corporate Responsibility
	Walmart	Zach Freeze, Senior Director Strategic Initiatives- Sustainability
ORGS	Closed Loop Partners	Bridget Croke, Managing Director
	U.S. EPA	Cheryl Coleman, Director for the Resource Conservation & Sustainability Division
	ISRI	Robin Wiener, President
	SPC	Nina Goodrich, Director of Sustainable Packaging Coalition
CITY & STATE	City of Phoenix	Ginger Spencer, Public Works Director
	South Carolina	Richard Chesley, Manager SW & Recycling
	NERC	Lynn Rubinstein, Executive Director
MRFs	Balcones Resources	Joaquin Mariel, VP of Operations
	Casella Recycling	Bob Cappadona, Vice President
	Eureka	Kate Davenport, Co-President
	Recology	Mark Arsenault, Executive VP and COO
	Republic Services	Pete Keller, VP Recycling and Sustainability
	Rumpke	Steve Sargent, Director of Recycling
	Sims	Tom Outerbridge, Manager
	Waste Management	Brent Bell, VP Recycling